

Evaluation of Michigan Watershed-Based Storm Water Discharge Permit and Summary of Implementation in the Rouge River Watershed

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The following evaluation of the Michigan Watershed-Based Storm Water Discharge Permit is organized by answers to questions posed by the U.S. Environmental Protection Agency. Much of the evaluation is based on implementation of the permit within the 438 sq mi Rouge River Watershed in southeast Michigan, home to 1.5 million people and which spans all or part of 48 communities in three counties.

1. "How many voluntarily signed up for a permit before, or in absence of regulatory deadlines?"

The history of the Michigan Watershed-Based Storm Water Discharge Permit (Watershed Permit) is that the Michigan Department of Environmental Quality (MDEQ) issued a voluntary, watershed-based permit in 1997, which was reissued in 1998 as General Permit No. MIG610000 before any certificates of coverage were issued under the 1997 permit. There are 48 communities and three counties within the Rouge River watershed. Additionally, within County government in Michigan, there may be several public agencies who own, operate, or control storm water discharges from the County (e.g., Road Commission, Drain Commissioner). There are several communities in the Rouge River watershed where sewer service is either entirely or largely a combined system. Virtually all communities and most County agencies with separate sewer systems, a total of 53 communities/counties/agencies, applied for and received coverage under the voluntary, watershed-based permit in 1999. Additionally, most of the communities where sewer service is either entirely or largely a combined sewer system also applied for and received coverage under the voluntary watershed-based permit in 1999 due to the perceived benefits of working under a watershed approach to manage the water resources in their community. Finally, the Michigan Department of Transportation applied for and received coverage under the voluntary permit for their storm water discharges within one Rouge community.

It should be noted that the Rouge River restoration has been under the purview of the U.S. District Court since 1977. While the court did not order Rouge communities/counties to apply for coverage under the voluntary permit, the overview of the court may have contributed to the high percentage of eligible communities/agencies who volunteered for coverage under this permit in advance of a regulatory deadline.

In addition to the 53 communities/agencies in the Rouge River Watershed, other public agencies in Michigan applied for coverage the voluntary, watershed-based storm water permit in advance of a regulatory deadline. For example, in southeast Michigan, Macomb County and the City of St. Clair Shores applied for and received coverage under this permit. The MDEQ has detailed information regarding statewide applications and coverage under the voluntary, watershed-based permit.

The watershed-based storm water general permit was reissued by MDEQ in December 2002 (effective April 1, 2003) as General Permit No. MIG619000. In February 2003, MDEQ also issued a traditional storm water general permit (Permit No. MIS040000) to provide a jurisdictional-based option for permit compliance to public agencies with storm water permit obligations. The MDEQ has detailed information regarding statewide applications (due March 10, 2003) and coverage under these permits. During the September 2003 conference calls with EPA to discuss the success of the watershed-based storm water permit, it was relayed that approximately 75% of the applications for permit coverage received by MDEQ in response to the March 2003 application deadline were for the watershed-based storm water general permit.

2. "Any other indication of permit effectiveness in controlling NPDES storm water and other sources (e.g. septic tanks)?"

There are a number of ways that the effectiveness of the watershed-based permit to reduce pollution and improve water quality/ecosystem health is being measured. The permit applicant is required to submit a number of items with the application for coverage under the permit. Upon successful application submittal and subsequent issuance of the Certificate of Coverage (COC) by the MDEQ, each permittee within a given watershed has five major milestones to complete during the first term of the permit:

- Illicit Discharge Elimination Plan (IDEP): due one year after issuance of COC
- Public Education Plan (PEP): due one year after issuance of COC
- Public Participation Plan (PPP): due six months after issuance of COC. One document developed collectively and submitted to MDEQ for all watershed permittees.
- Watershed Management Plan(s): due two years after issuance of COC. One document developed collectively and submitted to MDEQ for all watershed (or subwatershed) permittees.
- Storm Water Pollution Prevention Initiative (SWPPI): due two and one half years after issuance of COC.

Each of these documents contain mechanisms to ensure measurement of progress, and to provide flexibility to change the program if some management measures are not proving effective. For example, the Watershed Management Plan requires:

- definition of the short-term and long-term goals and for the watershed

- determination of actions needed to achieve the short-term goals for the watershed,
- determination of actions needed to achieve the long-term goals for the watershed,
- assessment of both the benefits and costs of the actions identified above
- commitments, identified by specific permittee or others as appropriate, to implement actions by specified dates necessary to achieve the short-term goals and to implement actions by specified dates necessary to initiate achievement of the long-term goals, and
- identification of methods for evaluation of progress, which may include chemical or biological indicators.

Because the Rouge watershed is so large and involves so many stakeholders, the communities chose to subdivide the watershed into seven subwatersheds. Subwatersheds give a means for focusing the local resources to address local problems due to the interest people have in their immediate surroundings. Watershed advisory groups were formed for each subwatershed to develop the required watershed management plan. Coordination of the efforts of the seven subwatershed groups was accomplished by a watershed-wide steering committee, which has since evolved into the new Rouge River Watershed Local Management Assembly, discussed in the next section.

The Storm Water Pollution Prevention Initiative is developed by each permittee within the watershed, and commits the permittee to specific actions from the watershed plan. For each short-term goal in the watershed, the following are required:

- Indication of applicability of goal to permittee.
- Method for evaluating progress (including location(s), if appropriate).
- Target for evaluating progress; must have a schedule. Targets provide a benchmark against which to measure progress and a focus around which to plan monitoring schemes. Targets should be tied to beneficial uses, where appropriate.
- Party responsible for evaluating progress.

An example of this table is presented in Appendix A. For each action committed to by permittee, the following are required:

- Goal(s) addressed by each action,
- Coverage of “permit-required” activities,
- Method of implementation and schedule, and
- Method(s) of reporting/measuring progress.

An example of this table is presented in Appendix B. In the Rouge watershed, over 250 different types of activities in existing and new programs were identified, with commitments to over 1,100 activities by the communities and agencies. An advantage of this watershed-based permit is that the commitments include such activities as streambank stabilization and habitat restoration which are not typically

included in traditional storm water permits. Each permittee must submit an annual report which documents, by activity, efforts made toward compliance.

Specific to onsite sewage disposal systems (OSDS) (septic systems), two of the three counties in the watershed (Wayne and Washtenaw) adopted programs requiring regular inspection of OSDS. In 2002, Wayne County performed 121 evaluations, 21 failed systems identified and corrected; Washtenaw County inspected 881 systems, 180 failed systems identified and corrected.

3. “Do we know enough to call it a "success"?”

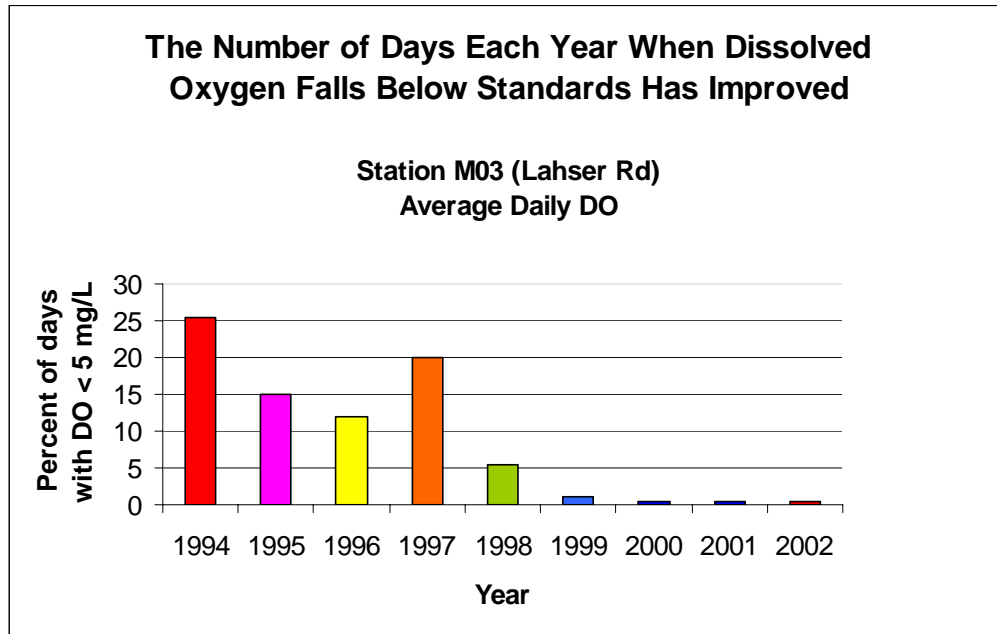
The Michigan Watershed-Based Storm Water Discharge Permit is an unqualified success, using any of several measures of achievement. For example, water quality and ecosystem health have steadily improved for the past four years; listed below are some examples of the indicators used:

- Dissolved oxygen (DO) Concentrations approaching 100% compliance (for the first time in decades). As recently as 1995, dissolved oxygen concentrations in the most downstream sections of the Rouge, in the concrete channel part of the river, routinely dropped to 0 mg/L during the summer. This water only met the minimum state standard about 30% of the time. For the past years, dissolved oxygen standards are met over 95% of the time in both dry and wet weather.
- Combined sewer overflow (CSO) loads cut by 90 to 100 percent most events
- Toxic chemicals no longer considered a major concern
- All major sources of pollution under NPDES permits in advance of the federal deadline
- MDEQ survey in 2000 showed “acceptable” health of biological communities generally throughout watershed
- Improvements in the water quality and removal of contaminated sediment in Newburgh Lake resulted in the recent lifting of a fish consumption advisory for some species of fish in the lake. This is the first time fish caught in the Rouge River system have been safe for consumption in decades.
- Salmon are now migrating from the downstream Detroit River up into the Rouge River system, and are now spawning in the headwaters of the Rouge.
- Mink have been sighted at different locations, including at the mouth of the Rouge
- In 2002 and 2003, Frog and Toad survey volunteers heard a greater number of green frogs and northern leopard frogs than during the 2001 survey

There are strong illicit discharge elimination program in place. For example:

- Wayne County: over 1,900 improper connections identified and eliminated (October 1987 – April 2002)
- Oakland County: inspected over 3,800 stormwater outfalls (2001)
- Washtenaw County: Inspected 118 septic systems 26 failing (2001)

Water Quality Improvements Measured at Most Downstream Station in Rouge River



Partnerships are being strengthened. For example, during the past year:

- The Friends of the Rouge (FOTR) Frog and Toad Survey had 705 volunteers monitoring around the watershed
- Over 200 stakeholders participated in FOTR Rouge Watershed bus tours in the past year
- 270 FOTR volunteers stenciled 4,309 Rouge Watershed storm drains
- Over 5,000 students participated in the Rouge Education Project
- There were 20 Rouge Rescue/River Day sites in 2002

People are returning to the river. For example, during the past year:

- More than 150 riparian land owners attended two workshops to learn about techniques they could use to improve the Rouge River
- 150 students, teachers, parents and friends volunteered time to plant native trees, flowers and seeds along the banks of Truesdell Creek in Canton
- For two consecutive years, over 130 people participated in Johnson Creek Protection Day to stabilize streambanks, clean-up creeks and enjoy the resource

Perhaps the best answer to whether the Michigan watershed-based permit can be called a success is given by the fact that the 48 communities and three counties in the Rouge River watershed have worked to form a new voluntary, watershed-wide

institutional arrangement to continue the Rouge watershed restoration efforts into the future. A summary of this ground-breaking consortium is presented below.

- The Rouge River Watershed Local Management Assembly (Rouge Assembly) is a voluntary organization of the local municipal governments (i.e., cities, townships, and villages) and the three counties (i.e., Wayne, Oakland and Washtenaw) located in part or totally within the watershed of the Rouge River located in southeast Michigan. It was formed in August of 2003, following nearly two years of discussion between the communities and the three counties who recognized that the federal support to Wayne County for the Rouge River National Wet Weather Demonstration Project that funded water quality restoration activities since 1993, was being substantially reduced.
- The Rouge Assembly structure involves a general assembly that meets twice a year where any member can require that issues be decided based upon a of voting shares with the communities having 75% of the voting shares proportional to their individual monetary assessments, and the three counties dividing the remaining 25% based upon their respective population within the watershed. Annually the full Rouge Assembly elects three officers (i.e., Chair, Vice Chair, and Treasurer) from among its community members. The three officers, representatives of the three counties, and elected representatives from the seven subwatershed groups comprise the Rouge Assembly Executive Committee that oversees the operations of the Assembly between the semiannual meetings of the full Assembly. In addition, each of the officers chairs one of three standing committees (i.e., Finance, Public Involvement, Technical). Two special committees (i.e., Organization, and Membership) were established to examine and recommend organizational changes including potential legal status, and broadening membership to include other public agencies within the watershed.
- As of October of 2003, 35 communities plus the three counties have signed the Memorandum of Agreement. Only one local community with a limited area within the watershed has declined to participate, and four communities are still considering membership. Assessments totaling \$169,000 have been paid since the agreement was adopted August 5, 2003, and a total expected total contribution from communities of just under \$300,000.

Finally, the following is an independent comment on the success of the Rouge Project and it's watershed-based initiatives, from the EPA Office of Inspector General evaluation report on "Wastewater Management - Controlling and Abating Combined Sewer Overflows" (Report 2002-P-00012, August 2002):

"The Rouge River National Wet Weather Demonstration Project ... is an excellent example of how utilizing a watershed approach can help to achieve water quality goals more efficiently."

- **U.S. EPA Office of the Inspector General**

4. “What are lessons learned from this project, given that Phase II general permits, and watershed permitting both are being scaled up?”
 - A watershed approach, with its integrated approach to address all sources of pollution and impairment (e.g., flow), results in development of holistic solutions and local ownership of the watershed.
 - Communities look holistically when working together
 - Having a role in developing solutions results in ownership and innovation
 - In urban areas, quantity of stream flow is very important in assessing water quality degradation and ecosystem health and the subsequent correction of the problems. By solving problems with high flow, many water quality and ecosystem health problems will also be solved.
 - It is necessary to build accountability for water quality at local level
 - A locally driven watershed approach requires a sharing of power with regulatory agencies
 - Increased local accountability garners local political support and generates peer pressure
 - In a large watershed it is most effective to restore or protect water quality and ecosystem health by looking at subwatersheds within the overall watershed.
 - Smaller areas are more manageable in terms of addressing water quality problems.
 - People identify more with a subwatershed than a larger watershed. Local ownership of pollution problems and their solution is critical.
 - It is easier to analyze the various sources of water quality problems in the subwatershed and decide how to get a handle on the priority of dealing with those problems.
 - It is critical to establish a hierarchy of pollution sources in a subwatershed, point sources and nonpoint sources, based upon the adverse water quality impacts of those sources. It is very important to keep reinforcing, at a subwatershed level, the concept of not randomly leaping on pollution sources but to prioritize the control of those sources to get desired environmental protection. It may take a long time to correct some of these pollution sources so it is important to prioritize the control programs.
 - It is critical to assess the cumulative watershed impacts to quantitatively assess the physical and biological processes and then fashion the subwatershed solutions.
 - Before river restoration can be initiated, it is critical to understand the cause of stream disturbance and disequilibrium conditions. Without this understanding, the restoration often treats the symptoms rather than effecting a cure.

- It is easier to manage a process that has a smaller set of stakeholders and competing interests.
 - It is easier to convince people that water quality improvements will require lots of little and possibly inexpensive actions and not exclusively massive capital programs.
 - The tools needed to solve a subwatershed water quality problem must be geared to that subwatershed. The management plan that is developed must be tailored to address subwatersheds specific problems.
- Achieving pollution abatement in a more timely, cost effective fashion must have general public support. Broad-based public education and involvement programs are critical to the overall success of watershed projects, particularly in urban areas.
 - Combining the watershed approach with the concept of phasing needed pollution controls assists with obtaining public support
 - The public needs time to understand the complexities of restoring a degraded river and to then respond with the needed support, including the commitment/will and the financial support. The Rouge River Project has learned that the general public does not fully understand/appreciate a goal of “meeting water quality standards”. What they do understand and appreciate is whether a waterway is fishable and swimmable. They accept that if all of the sewage is not removed from the water it is not swimmable; if toxics preclude fish consumption the water is not fishable; and if habitat is destroyed there will be no fish and therefore the water is not fishable. In summary, if the conditions of the river discourages fishing, swimming and other recreation, attention must be directed at correcting the problems.
- Another important lesson has been on the need to measure, communicate and account for progress. Having good data systems in place to measure and communicate progress is a critical part of watershed work. They not only keep watershed issues on people’s radar screens but assist in sharing successes and facing new challenges to the watershed.
 - Generally local commitments to address pollution problems in a watershed will come in small increments with the demand to demonstrate the value of those increments if support is to be sustained
- A data management and information system that can effectively communicate to the broad public is critical to achieving success in watershed/water quality restoration projects.
 - In order to make informed decisions on water quality improvements in a watershed system, it is necessary to have access to and to be able to process large amounts of data. It is important to consider very early in the process how the data will be compiled and analyzed. In other words, consider what

type of data and information system is needed to accomplish the desired objective of analysis and communication of results. What is being demonstrated by the data system needs to “come through” as a clear message.

- The involvement of local officials in the process is critical to the long-term success of the information system. Most local governments have or soon will have GIS systems to aid them in decision making. Every effort should be made to bring together the local units of government in the watershed to establish ways to share information between data systems and to get commonality in information going into the various data/information systems. This cooperation fosters watershed based decisions versus individual city based decisions.
- The toughest problems to be addressed and solved in wet weather and watershed protection programs are developing and implementing the institutional and financial arrangements needed to sustain the program. The technical issues are easy by comparison. Early and continued efforts should be directed towards developing workable institutional and financial arrangements.
 - In order for a watershed project to be successful “an ” institution to oversee the progress is not necessarily needed. What is critical is the need for effective institutional arrangements. These can be as simple as utilizing forms of interjurisdictional cooperation or remaking or combining existing institutional arrangements. These solutions will mirror the complexity of the problem to be solved.
- There are increased opportunities for cost efficiencies and innovation; the Watershed Permit provides a forum for cost-effective watershed activities.
 - Joint public education projects, staff training, etc.
 - Common standard/protocols
 - Opportunities to implement other programs (e.g., water quality trading)
 - The Rouge Project is a working demonstration of the watershed approach to restoring an urban river system. Tangible benefits of this approach: faster environmental improvements and cost savings

APPENDICES

- **APPENDIX A:** Example Goal-Specific Assessment of Progress from Storm Water Pollution Prevention Initiative
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- **APPENDIX B:** Example Activities and Methods of Assessment of Progress from Storm Water Pollution Prevention Initiative

APPENDIX A: Example Goal-Specific Long Term Assessment of Progress from Storm Water Pollution Prevention Initiative

From: Wayne County SWPPI, for Lower One Rouge Subwatershed

#	L1 SWMP Goals or Objectives	Methods for Evaluating Progress in River	Target for Evaluation in the Subwatershed (per the L1 SWMP)	Responsible Party for Evaluating Subwatershed Progress
1	Reduce flow variability	<ul style="list-style-type: none"> A. New USGS station at downstream end of L1 subwatershed in Rouge. B. Wayne Co. rainfall monitoring in Rouge. C. Low-tech, low-cost flow monitoring at 2 sites (L01, L02) in Rouge. D. Macroinvertebrate monitoring 	<ul style="list-style-type: none"> • Peak flow targets will be observed with new data from new USGS gage at downstream end of L1 subwatershed in 2001 in Rouge. • To not exceed target peak flows for more than 10% of the time at L01: 2 cfs and at L02: 4 cfs., based on 1998 Wiley/Seelbach study, if flow can be measured at these locations in Rouge, by 2020. • Tracking long term trends in macroinvertebrate community health, attain GLEAS 51 scores of at least "fair" at Sheldon Rd. by 2015. 	<ul style="list-style-type: none"> A. Rouge Program Office (RPO), USGS B. Wayne Co. C. RPO D. FOTR Volunteers
2	Reduce nutrient loading	<ul style="list-style-type: none"> A. Dry and wet weather sampling at least 2 sites (L01, L02) in Rouge. B. Macroinvertebrate monitoring. 	<ul style="list-style-type: none"> • Using 0.05 mg/l TP in dry weather as a reference, study and identify sources of TP in L1 subwatershed to determine date by which we can expect to achieve 0.05 mg/l TP (or other target shown to support fair to good aquatic diversity, if found), by 2003 in Rouge. • Tracking long term trends in macroinvertebrate community health, attain GLEAS 51 scores of at least "fair" at Sheldon Rd. by 2015. 	<ul style="list-style-type: none"> A. RPO B. FOTR Volunteers
3	Reduce soil erosion and sedimentation	<ul style="list-style-type: none"> A. Dry and wet weather sampling at least 2 sites (L01, L02) in Rouge. B. Habitat assessment, embeddedness and bottom deposition measures in Rouge. C. Aesthetics monitoring in Rouge. D. Macroinvertebrate monitoring. 	<ul style="list-style-type: none"> • Based on achieving desired aesthetic use, maintain or achieve TSS concentrations below 80 mg/l in dry weather conditions, by 2006 in Rouge. • MDEQ/GLEAS habitat evaluations of embeddedness and bottom deposition, showing trends of decreasing sedimentation in Rouge by 2006. • Tracking long term trends in macroinvertebrate community health, attain GLEAS 51 scores of at least "fair" at Sheldon Rd. by 2015. 	<ul style="list-style-type: none"> A. RPO B. MDEQ/GLEAS C. Communities/agencies, Volunteers D. FOTR Volunteers
4	Protect and mitigate the loss of natural features	<ul style="list-style-type: none"> A. Evaluate frog and toad population trends in Rouge. B. Biological monitoring (fish, macroinvertebrates) in Rouge. C. Dry and wet weather sampling at least 2 sites (L01, L02) in Rouge. 	<ul style="list-style-type: none"> • Track and report frog and toad populations to detect trends in decline or increase over time and relate to land use changes, habitat protection in Rouge. • For fisheries, maintain GLEAS 51 scores of "excellent" at Fellows Creek, "good" at Sheldon and Van Born Rds., and attain scores of at least "good" at Denton Rd., by 2015. Maintain sensitive fish communities. Review 2000 MDEQ data and revise targets to reflect changes in Rouge. • For macroinvertebrates, increase monitoring sites to improve database by 2005 and attain GLEAS 51 scores of at least "fair" at Sheldon Rd. by 2015 in Rouge. Review 2000 MDEQ data and revise targets to reflect changes in Huron and Rouge. • For warmwater streams, maintain or achieve a daily average DO regime of 5.0 mg/l, by 2005. 	<ul style="list-style-type: none"> A. FOTR Volunteers B. MDEQ/GLEAS, FOTR Volunteers for macroinvertebrates C. RPO

APPENDIX A: Example Goal-Specific Long Term Assessment of Progress from Storm Water Pollution Prevention Initiative

From: Wayne County SWPPI, for Lower One Rouge Subwatershed

#	L1 SWMP Goals or Objectives	Methods for Evaluating Progress in River	Target for Evaluation in the Subwatershed (per the L1 SWMP)	Responsible Party for Evaluating Subwatershed Progress
			<ul style="list-style-type: none"> Maintain or achieve a maximum summer temperature at or below 29.4° C (85°F) for warmwater fisheries, by 2005. 	
5	Increase opportunities for passive and active recreation	A. Recreation use and aesthetics monitoring/surveys B. Dry and wet weather sampling at at least 2 sites (L01, L02) in Rouge.	<ul style="list-style-type: none"> Improve aesthetic conditions where feasible, by 2010. Increase recreation potential and use in the subwatershed by 2007. Maintain or achieve partial body contact in dry weather conditions (1,000 colonies per 100 ml for bacteria) for main branch and tributaries with a base flow of, or greater than, 2 cfs, by 2010 for Rouge. 	A. Communities/agencies, Volunteers B. RPO
6	Increase water quality, water quantity, and biological monitoring in the subwatershed	A. Long term Subwatershed In Stream Monitoring Plan for the Rouge B. Work with FOTR volunteer monitoring programs, as well as RPO and MDEQ.	<ul style="list-style-type: none"> Establish a subwatershed based, or community based, monitoring plan as needed to determine progress toward goals. Work with monitoring agencies (RPO, DEQ, FOTR, etc.) to support and enhance existing monitoring programs. 	A. RPO, Communities/agencies B. FOTR Volunteers
7	Increase public understanding of their role in protecting water quality	A. Reporting on activities performed and evaluating success.	Evaluation method(s) provided in Table 3.	A. Communities/agencies
8	Integrate storm water management in planning process	A. Reporting on activities performed and evaluating success.	Evaluation method(s) provided in Table 3.	A. Communities/agencies
9	Establish financial and institutional arrangements for the fulfillment of the management plan	A. Reporting on activities performed and evaluating success.	Evaluation method(s) provided in Table 3.	A. Communities/agencies
10	Enforce action plans and increase accountability for storm water management	A. Reporting on activities performed and evaluating success.	Evaluation method(s) provided in Table 3.	A. Communities/agencies

It is recognized by the permittee and the MDEQ that the subwatershed targets and schedules in Table 2A are intended to track effectiveness and progress of the SWPPI actions, and progress towards the subwatershed goals. The targets and schedules are not enforceable compliance items required by the permit, and the permittee will not be found in noncompliance with the permit if they are not achieved. The permittee's actions and schedules in Table 3 are enforceable. If, during SWPPI revisions, it is determined that progress towards achieving the subwatershed targets is not being made, the permittee and the MDEQ will negotiate additional and/or alternative actions, schedules, or targets.

**APPENDIX B: Example Activities and Methods of Assessment of Progress from
Storm Water Pollution Prevention Initiative
From: Wayne County SWPPI**

Activity	SWAG Goals Addressed	Required Activity	Method of Implementation and Schedule	Method(s) to Report
ILLICIT DISCHARGE ELIMINATION PROGRAM				
Urban Source Control	1U, 2L2, 2MN3/4, 2M3, 4U, 1L2, 1MN3/4, 1M3, 3U, 4L1, 4L2, 4MN3/4, 4M1, 4M3, 5M3, 2U, 1L1, 6L2, 6MN3/4, 1M1, 5U, 3L1, 5L2, 5MN3/4, 3M1, 2L1, 2M1, 7L1, 3L2, 3MN3/4, 7M1, 3M3, 6M1, 6L1, 8M1, 8L1, 9L1, 9M1, 10M1, 10L1, 6M3, 7M3	IDEP1	Continue operation of DOE environmental hotline reporting system. Respond to water quality-based complaints within County jurisdiction. Location: Countywide. Schedule: Ongoing	# of hotline complaints received, annually. # of water quality-based complaints addressed by County, annually. Summary of the nature of complaints and follow up actions.
IDEP Training Workshops	1U, 2L2, 2MN3/4, 2M3, 4U, 1L2, 1MN3/4, 1M3, 5L1, 5M1, 2M3, 3U, 4L1, 4L2, 4MN3/4, 4M1, 4M3, 5M3, 2U, 1L1, 6L2, 6MN3/4, 1M1, 5U, 3L1, 5L2, 5MN3/4, 3M1, 2L1, 2M1, 7L1, 3L2, 3MN3/4, 7M1, 3M3, 6M1, 6L1, 8M1, 8L1, 9L1, 9M1, 10M1, 10L1, 6M3, 7M3	IDEP2	Continue WMD's IDEP Training Program for County Staff, and Other Agencies. Schedule: County staff, ongoing; Other agencies, upon request.	# of training sessions and # of people trained: County staff, other agencies; annually
Illegal Dumping Control	7L1; 3L2, 3MN3/4, 7M1, 3M3	IDEP5	Continue enforcement of County Illegal Dumping Ordinance and MCI Ordinance. Install/maintain "No Dumping" signage along County Drains. Respond to illegal dumping complaints received by WCDOE Environmental Hotline/Response. Location: Countywide. Schedule: Ongoing	# of dumping violations investigated and/or prosecuted annually. # of new "No Dumping" signs installed annually. Summary of dumping complaint responses, annually.
Inspection of County-owned Facilities	1U, 1L2, 2MN3/4, 2M3, 4U, 1L2, 1MN3/4, 1M3	IDEP7	Continue Dye-testing Inspections of County-owned or -operated facilities. Location: Rouge Watershed until complete, then other watersheds. Schedule: Ongoing	# of County buildings / facilities inspected annually, status of corrections (if necessary).

**APPENDIX B: Example Activities and Methods of Assessment of Progress from
Storm Water Pollution Prevention Initiative
From: Wayne County SWPPI**

Activity	SWAG Goals Addressed	Required Activity	Method of Implementation and Schedule	Method(s) to Report
Visual Inspections During Routine Field Operations	1U, 2L2, 2MN3/4, 2M3, 5L1, 2M1, 4U, 1L2, 1MN3/4, 1M3, 3U, 4L1, 4L2, 4MN3/4, 4M1, 4M3, 5M3, 5U, 3L1, 5L2, 5MN3/4, 3M1	IDEP8	Continue inspections of outfalls, County Drains, waterways and County properties for illicit discharges (including illegal dumping and excessive soil erosion) during routine field operations. Schedule: Ongoing. Location: Countywide	# of illicit discharge observations by County staff, annually. For County Drains: # of miles inspected per year. Summary of corrections made.
PUBLIC EDUCATION PROGRAM				
Staff education and training	7L1, 3L2, 3M3/4, 7M1, 3M3	PEP2	Continue efforts to educate and involve Wayne County staff in storm water pollution prevention. Efforts include: Pollution prevention messages published in Wayne County employee newsletters, continue to prepare and broadcast watershed awareness and pollution prevention messages to County staff via County email system. Schedule: Ongoing	# of fliers and newsletters distributed annually, # email message broadcast annually. List of pollution prevention topics and messages discussed in training sessions or contained in distributed materials.
Education: Home Lawn and Garden Maintenance	5U, 2L1, 7L1, 3L2, 3MN3/4, 1MN3/4, 2M1	PEP1	Will continue to provide lawn and garden maintenance education to reduce nutrient loading through a variety of means/opportunities/tools which may include but not limited to distribution of Rouge Repair Kits and other information brochures, and participation in outreach programs (e.g "Don't Guess Soil Test" campaign). Schedule: Ongoing, at events and other appropriate opportunities	# of Rouge Repair Kits distributed, summary of efforts; annually
Signage	7L1, 3L2, 3MN3/4, 7M1, 3M3	PEP3	DPS Roads: Watershed/River Crossing signs installed as part of ongoing roads construction projects. Location: Rouge Watershed. Schedule: Ongoing. DOE-DPW: "No Dumping" signs installed along County Drains and other locations. Location: Countywide. Schedule: Ongoing. DPS-Parks: Continue, maintain and expand "don't Feed the Geese" signs. Location: Countywide. Schedule: Ongoing. Parks: Continue to maintain and expand signage in Wayne County Parks (e.g., "Don't Feed the Geese", environmental interpretive) related to pollution prevention and environmental awareness. Location: Countywide. Schedule: Ongoing.	# and locations of signs installed annually, by type

**APPENDIX B: Example Activities and Methods of Assessment of Progress from
Storm Water Pollution Prevention Initiative
From: Wayne County SWPPI**

Activity	SWAG Goals Addressed	Required Activity	Method of Implementation and Schedule	Method(s) to Report
ADDITIONAL STORM WATER MANAGEMENT ACTIVITIES				
Flow Obstruction Prevention/Removal and Woody Debris Management	4U, 1L2, 1MN3/4, 1M3, 3U, 4L1, 4L2, 4MN3/4, 4M1, 4M3, 5M3	SWPPI	Continue to support river day and education/training of County staff regarding woody debris management. Schedule: 1 training session per year.	Summary of education and training efforts, implementation of projects; annually
Stream Bank Stabilization Efforts - County Implemented	3U, 4L1, 4L2, 4MN3/4, 4M1, 4M3, 5M3, 5U, 3L1, 5L2, 5MN3/4, 3M1, 2L1, 2M1	SWPPI	Education and training of County Public Works (Drains) and Parks staff to identify and implement appropriate streambank stabilization projects (bioengineered, biotechnical, or engineered) where feasible. Location: Countywide. Schedule: Ongoing	# of projects completed, summary of training efforts; annually
Habitat Restoration	5L1, 5M1, 2M3, 3U, 4L1, 4L2, 4MN3/4, 4M1, 4M3, 5M3, 7L1, 3L2, 3MN3/4, 7M1, 3M3	SWPPI	Encourage and facilitate habitat restoration through education/training/technical assistance via group and event support and participation (e.g. River Day, Johnson Creek Protection, etc.). Schedule: Ongoing - 2 groups and/or events per year	Report education and training efforts, # sites or projects addressed/implemented; annually